The snow fell gently, without wind, from about 8:30 p. m. of the 10th to during night a. m. of the 12th, but the major portion of the snow had fallen by 8 a. m. of the 11th, and even the smallest twigs held a goodly share. Spaces as wide as 10 inches were bridged across and bunches of snow remained in the trees for three days. The weight of the snow, however, was small and little damage was done. No limbs of trees were broken, but a few electric wires came down. Country roads were not blocked to automobiles.

During the fall of snow the temperature remained steadily at 32° F.

The quite unusual clinging quality of the snow was due to the fact that the crystals were straight, fuzzy rods averaging about one-sixteenth inch in length and these, on reaching a suitable support, clung together, forming a tenacious blanket.—*John R. Weeks.*

SNOW ROLLERS.

AVON, N. Y., *February 9.*—When Peter Finigin went out to do the chores one morning recently he was mystified by the sight of a large number of huge snowballs scattered over his farm. On the 20-acre field there were hundreds of them, ranging in size from 6 to 18 inches in diameter. Leading up to each snowball was a streak of bare ground showing the distance it had traveled in forming.

Mr. Finigin and neighbors who gathered to study the odd spectacle decided that the wind, which had blown a gale the night before, had whipped up small particles of "good packing" snow and started them down the field, some of the particles gathering up additional snow until balls had been formed that were too heavy for the wind to move farther. All the paths of the snowballs were in the same general direction that the wind had been blowing.

To record the unusual freak of wind and snow, Mr. Finigin sent for the correspondent of a Buffalo newspaper, who counted more than 1,000 snowballs of more than 10 inches in diameter.—*Washington Evening Star,* Feb. 9, 1921.

BIBLIOGRAPHIC NOTE.[1]

* * * The most extensive account of snow rollers in the English language is that given in the *Quarterly Journal* of the Royal Meteorological Society, volume 34, 1908, pages 87–96. This is mainly a compilation of accounts of the phenomenon previously published in scientific books and journals, and is illustrated. Some of these accounts appeared in the MONTHLY WEATHER REVIEW.[2]

Probably the most important contribution to the subject of snow rollers is the article, "Schneewalzen," by Rudolf Meyer, in Korrespondenzblatt des Naturforscher-Vereins zu Riga, volume 52, 1909. This gives a list and analysis of all cases known to the writer between the years 1808 and 1909, and is accompanied by a bibliography which lists 35 previous papers on the subject in several languages.

Snow rollers were observed in Morris County, N. J., in January, 1809, by Rev. D. A. Clark, when it is stated that "the whole landscape was covered with snowballs, differing in size from that of a lady's muff to the diameter of 2½ or 3 feet, hollow at each end to almost the very center, and all as true as so many logs shaped in a lathe."—*C. Fitzhugh Talman.*

[1] Reprinted from *Scientific American,* New York, Mar. 15, 1913, p. 243.
[2] Dec., 1895, 23:465; Jan., 1898, 26:20; Mar., 1899, 27:100; July, 1906, 34:325–326; Feb., 1907, 35:70.

OUR INVOLUNTARY CLIMATIC TRAVELS.

(WITH SPECIAL REFERENCE TO THE WARM WINTER OF 1920-21.)

551.58 (.73)

By JOSEPH BURTON KINCER, Meteorologist.

[Weather Bureau, Washington, D. C., Mar. 2, 1921.]

The temperature of the atmosphere to which we are subjected, from day to day, plays an important rôle in our everyday life, particularly in so far as our bodily comfort when we are out of doors is concerned. Most of us do not relish extreme temperature conditions, and a considerable portion of our energy is expended in an effort to keep cool in hot, summer weather, and to keep warm when it is cold.

To escape the extreme temperature conditions of winter and summer, many people migrate yearly from north to south in winter and from south to north in summer. In northern latitudes they turn southward as the rigors of winter set in to sojourn until the gentle zephyrs of spring are due in their home community. Again, when the heat of summer begins in central and southern climes, all roads lead to some cool summer resort.

While some people thus bodily change their place of residence to enjoy climatic environments different from those usually experienced at home, many others, and much the greater portion of our population, either for reasons of choice, or for those beyond their control, stay at home. These latter, however, practically never stay at home climatically. They travel regardless of the press of business or the condition of their purse, but are not affected by increased railway or Pullman fares, for the figurative weather train furnishes free passage.

We are often handicapped, however, by reason of the fact that the science of meteorology has not, as yet, reached that degree of excellence where it is possible to forecast, with approximate certainty, in which direction, north or south, we will be transported to spend the season. To this end, however, the Weather Bureau is engaged in scientific investigations, to ascertain if seasonal schedules can be made. If this can be done our plans can be made accordingly, often at great economic advantage.

While we can not yet tell definitely in advance where our climatic season abode shall be, after we have enjoyed or deplored our involuntary weather trip, and have spent the winter or the summer either north or south of home, climatically, we can then consult the Weather Bureau records and determine just where we have been.

Such expressions as "It wasn't necessary to go to Florida this winter to enjoy a pleasant climate, for the weather here has been delightful" have been frequently heard recently. These suggest the questions, "How far south, from the standpoint of climate, did we really spend the winter just closed?" "Did we go as far south this winter as in some previous years?" "What is the farthest point south we have ever climatically spent a winter?" The answers to these and similar questions with regard to the summer season may be of interest, especially to those who have never given much thought to the fact that a